

A. Permit Certificate

**INDUSTRIAL
WASTEWATER-LAND APPLICATION PERMIT
LA-000022-04**

Glanbia Foods, Inc., LOCATED AT 1572 East Highway 26, Richfield, ID 83349 AND IN Lincoln County, Township T4S, Range R20E, Sections 7, 8, 17, and 18 (Expansion Acreage); and Township T4S, Range R19S, Section 26 (Facility and Legacy Site) IS HEREBY AUTHORIZED TO CONSTRUCT, INSTALL, AND OPERATE A WASTEWATER REUSE SYSTEM IN ACCORDANCE WITH THE WASTEWATER REUSE RULES (IDAPA 58.01.17) AND WASTEWATER RULES (IDAPA 58.01.16), THE GROUND WATER QUALITY RULE (IDAPA 58.01.11), AND ACCOMPANYING PERMIT, APPENDICES, AND REFERENCE DOCUMENTS. THIS PERMIT IS EFFECTIVE FROM THE DATE OF SIGNATURE AND EXPIRES ON **(60 months from issue date)**.

Douglas Howard, Regional Administrator
Twin Falls Regional Office
Idaho Department of Environmental Quality

Date: _____

**DEPARTMENT OF ENVIRONMENTAL QUALITY
1363 Fillmore St.
Twin Falls, ID 83301
(208) 736-2190.**

POSTING ON SITE RECOMMENDED

B. Permit Contents, Appendices, and Reference Documents

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Appendices

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 - c) "Existing Site" Map. Glanbia Foods, Inc.
 - d) Figure 4. City of Richfield Delineation Map and Potential Contaminant Source Locations. DEQ Source Water Assessment Final Report
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References

1. Plan of Operation (Operation and Maintenance Manual)

The Sections, Appendices, and Reference Documents listed on this page are all elements of Wastewater Reuse Permit LA-000022-04 and are enforceable as such. This permit does not relieve Glanbia Foods, Inc., hereafter referred to as the permittee, from responsibility for compliance with other applicable federal, state or local laws, rules, standards or ordinances.

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C. Abbreviations, Definitions

Ac-in	Acre-inch. The volume of water or wastewater to cover 1 acre of land to a depth of 1 inch. Equal to 27,154 gallons.
BMP or BMPs	Best Management Practices
COD	Chemical Oxygen Demand
DEQ or the Department	Idaho Department of Environmental Quality
Director	Director of the Idaho Department of Environmental Quality, or the Directors Designee, i.e. Regional Administrator
ET	Evapotranspiration – Loss of water from the soil and vegetation by evaporation and by plant uptake (transpiration)
GS	Growing Season – Typically April 01 through October 31 (214 days)
GW	Ground Water
GWQR	IDAPA 58.01.11 “Ground Water Quality Rule”
Guidance	Guidance for Land Application of Municipal and Industrial Wastewater
HLRgs	Growing Season Hydraulic Loading Rate. Includes any combination of wastewater and supplemental irrigation water applied to land application hydraulic management units during the growing season. The HLRgs limit is specified in Section F. Permit Limits and Conditions.
HLRngs	Non-Growing Season Hydraulic Loading Rate. Includes any combination of wastewater and supplemental irrigation water applied to each hydraulic management unit during the non-growing season. The HLRngs limit is specified in Section F. Permit Limits and Conditions.
HMU	Hydraulic Management Unit (Serial Number designation is MU)
IWR	<p>Irrigation Water Requirement – Any combination of wastewater and supplemental irrigation water applied at rates commensurate to the moisture requirements of the crop:</p> $IWR = IR / E_i = (CU - P_e) / E_i \text{ Where:}$ <p>IR = net irrigation requirement = $CU - P_e$ CU = consumptive use (<u>crop evapotranspiration</u>) for a given crop in a given climatic area P_e = effective precipitation. E_i = irrigation system efficiency.</p>
IDAPA	Idaho Administrative Procedures Act.
LG	Lagoon
lb/ac-day	Pounds (of constituent) per acre per day
MG	Million Gallons (1 MG = 36.827 acre-inches)
MGA	Million Gallons Annually (per WLAP Reporting Year)
NGS	Non-Growing Season – Typically November 01 through March 31 (151 days)
NVDS	Non-Volatile Dissolved Solids (= Total Dissolved Solids less Volatile Dissolved Solids)
O&M manual	Operation and Maintenance Manual, also referred to as the Plan of Operation
SAR	Sodium Absorption Ratio

C. Abbreviations, Definitions

SI	Supplemental Irrigation water applied to the land application treatment site.
Soil AWC	Soil Available Water Holding Capacity - the water storage capability of a soil to a depth at which plant roots will utilize (typically 60 inches or root limiting layer)
SMU	Soil Monitoring Unit (Serial Number designation is SU)
SW	Surface Water
TDS	Total Dissolved Solids or Total Filterable Residue
TDIS	Total Dissolved Inorganic Solids – The summation of chemical concentration results in mg/L for the following common ions: calcium, magnesium, potassium, sodium, chloride, sulfate, and 0.6 times alkalinity (alkalinity expressed as calcium carbonate). Nitrate, Silica and fluoride shall be included if present in significant quantities (i.e. > 5 mg/L each).
TMDL	Total Maximum Daily Load – The sum of the individual waste-load allocations (WLA's) for point sources, Load Allocations (LA's) for non-point sources, and natural background. Such load shall be established at a level necessary to implement the applicable water quality standards with seasonal variations and a margin of safety that takes into account any lack of knowledge concerning the relationship between effluent limitations and water quality. IDAPA 58.01.02 <i>Water Quality Standards and Wastewater Treatment Requirements</i>
Typical Crop Uptake	Typical Crop Uptake is defined as the median constituent crop uptake from the three (3) most recent years the crop has been grown. Typical Crop Uptake is determined for each hydraulic management unit. For new crops having less than three years of on-site crop uptake data, regional crop yield data and typical nutrient content values, or other values approved by DEQ may be used.
USGS	United States Geological Survey
WLAP	Wastewater Land Application Permit (or Program)
WLAP Reporting Year	The reporting year begins with the non-growing season and extends through the growing season of the following year, typically November 01 – October 31. For example, the 2006 Reporting Year would be November 01, 2005 through October 31, 2006.
WW	Wastewater applied to the land application treatment site

D. Facility Information

Legal Name of Permittee	Glanbia Foods, Inc.
Type of Wastewater	Whey Processing Wastewater
Method of Treatment	Land Treatment
Type of Facility	Whey Product Processor
Facility Location	1572 East Highway 26, Richfield, ID 83349
Legal Location	<u>Expansion Acreage</u> : Township T4S, Range R20E, Sections 7, 8, 17, and 18; <u>Facility and Legacy Acreage</u> : Township T4S, Range R19S, Section 26
County	Lincoln
USGS Quad	Pagari, Richfield
Soils on Site	<u>Expansion Acreage</u> : Loams, very deep (> 60 inches); Silt Loams, Moderately deep (20 – 40 inches) and very deep. <u>Legacy Acreage</u> : Silt Loams, very deep; Loams, deep (40 – 60 inches) and very deep
Depth to Ground Water	<u>Expansion Acreage</u> : Approximately 450 ft below grade <u>Legacy Acreage</u> : Ranges from 140 to 190 ft below grade
Beneficial Uses of Ground Water	Drinking Water, Irrigation Water for Agriculture
Nearest Surface Water	<u>Expansion Acreage</u> : James Byrnes Slough (1/4 mile); Little Wood River (1/2 mile). <u>Legacy Acreage</u> : Little Wood River (1/8 mile).
Beneficial Uses of Surface Water	Agricultural Irrigation, Cold Water Biota, Salmonid Spawning, Primary and Secondary Contact Recreation
Responsible Official Mailing Address Phone / Fax	Mr. Douglas Pettinger, Environmental Supervisor Glanbia Foods, Inc. 1728 South 2300 East, Gooding, Idaho 83330 (208) 934-8195 (w); (208) 934-8294 (fax)

E. Compliance Schedule for Required Activities

The *Activities* in the following table shall be completed on or before the *Completion Date* unless modified by the Department in writing.

Compliance Activity Number Completion Date	Compliance Activity Description
CA-022-01 Six (6) Months after Permit Issuance	<p>An updated Plan of Operation (Operation and Maintenance Manual or O&M Manual) for the wastewater land application facilities, incorporating the requirements of this permit, shall be submitted to DEQ for review and approval. The Plan of Operation shall be designed for use as an operator guide for actual day-to-day operations to meet permit requirements and shall include daily sampling and monitoring requirements to assess the adequacy of wastewater treatment facility operation. The Plan of Operation shall contain at a minimum all of the information in the latest revision of the Plan of Operation Checklist. The Plan of Operation shall also include the following:</p> <ol style="list-style-type: none">1) Nuisance Odor Management Plan for wastewater treatment systems, land application facilities, and other operations associated with the facility. The plan shall include specific design considerations, operation and maintenance procedures, and management practices to be employed to minimize the potential for or limit odors. The plan shall also include procedures to respond to an odor incident if one occurs, including notification procedures;2) Waste Solids Management Plan which shall describe how waste solids generated at the facility will be handled and disposed of to meet the requirements of Section I, No. 5;3) Contingency plan for emergency wastewater land treatment operations, including discussion of what constitutes an emergency; how frequently emergencies occur; specifying expected hydraulic and constituent loading rates, and environmental impacts, if any, to the legacy acreage; management of legacy acreage for even application of wastewater; cropping for uptake of currently and previously applied nutrients; and the provision of adequate supplemental irrigation water;4) A report of the projected status of operations, expansions, wastewater volumes and concentrations, and wastewater treatment needs for the next five (5) years of facility operation; and5) A Quality Assurance Project Plan (QAPP) for monitoring required in this permit. The plan shall cover field activities; laboratory analytical methods and other activities; data verification and validation; data storage, retrieval and assessment; and monitoring program evaluation and improvement.

E. Compliance Schedule for Required Activities

Compliance Activity Number Completion Date	Compliance Activity Description
CA-022-02 Twelve (12) Months after Permit Issuance	Conduct seepage testing in accordance with methods approved by DEQ on all wastewater storage structures and submit test results to DEQ. The seepage performance standard is 0.125 inches per day. If a properly tested lagoon leaks more than 0.125 inches per day, the permittee shall either 1) submit, for DEQ approval, a plan and schedule to either retest, repair, replace or decommission structures not meeting this standard or 2) develop a plan based on ground water sampling and analyses and/or modeling to determine the effect of the lagoon leakage on the local ground water. If actual or predicted impacts do not comply with IDAPA 58.01.11 as determined by DEQ, the permittee shall comply with 1) above.
CA-022-03 Eight (8) months after Permit Issuance	An updated Rehabilitation Plan for the Legacy Acreage shall be submitted to DEQ for review and approval, which includes 1) an assessment of previous environmental data pertinent to the remediation of the site, 2) an evaluation of adequacy of environmental monitoring requirements to determine site status (see further CA-022-04); 3) environmental quality goals for ground water and soils; 4) a site cropping plan, 5) an analysis of expected environmental impacts from use of legacy acreage for emergency wastewater land application; 6) a plan to abandon the tailwater ponding areas on the legacy acreage, prevent future ponding, and install an irrigation water sump to service Pivot 9; and 6) other management operations necessary for remediation of the site (see further CA-022-01).
CA-022-04 Eight (8) Months after Permit Issuance	A ground water monitoring plan (Plan) to be implemented during the life of this permit shall be submitted to DEQ, and shall be prepared by a qualified registered geologist in the state of Idaho. The plan shall include 1) plans for a monitoring well network for the Expansion acreage, and 2) an evaluation of the present Legacy acreage ground water monitoring well network (adequacy of monitoring well locations, construction, sampling protocol). The plan shall include an implementation schedule.
CA-022-05 Six (6) Months after Permit Issuance	Revised Expansion acreage vadose time of travel calculations from Appendix E of HDR (February 1, 2000) which address the specific lithology of the site shall be submitted to DEQ for review and approval. Aquifer travel time calculations shall also be included in this submittal.
CA-022-06 Two (2) Months after Permit Issuance	Submit to DEQ for review and approval a runoff management plan, prepared by a professional engineer licensed in Idaho, with control structures and other BMPs (e.g. collection basins, berms, etc.) designed and engineered to prevent runoff from any site or fields previously or presently used for wastewater land application to property not owned by the permittee in the event of a 25-year, 24-hour storm event or greater, using Western Regional Climate Center (WRCC) Precipitation Frequency Map, Figure 28 'Isopluvials of 25-YR, 24-HR Precipitation'. For this site, the 25-year, 24-hour event is 2.0 inches.

E. Compliance Schedule for Required Activities

Compliance Activity Number Completion Date	Compliance Activity Description
<p style="text-align: center;">CA-022-07 See Compliance Activity Description for Dates</p>	<p>The interim non-growing season (NGS) hydraulic loading rate for the Expansion Acreage is specified in Section F of this permit as the 'Current NGS Hydraulic Loading Rate' (Current Rate). If the permittee wishes to retain the Current Rate, adequate justification, as determined by DEQ, must be submitted to DEQ for review and approval according to the following schedule:</p> <ul style="list-style-type: none"> a) no later than three (3) months after permit issuance, the permittee shall submit a draft of justification for DEQ review and comment. b) no later than six (6) months after issuance of DEQ comments specified in a) above, the permittee shall submit final justification for DEQ review and approval. c) Twenty-four (24) months after DEQ issues its review of the final justification, the permittee shall either: <ul style="list-style-type: none"> 1. continue to apply at the 'Current Rate' until permit expiration, if DEQ determines adequate justification has been submitted; 2. commence application at the 'Contingent NGS Hydraulic Loading Rate' (Contingent Rate) as specified in Section F of this permit, if DEQ determines that inadequate justification has been submitted, or 3. commence application at an Alternate NGS Hydraulic Loading Rate (Alternate Rate), if DEQ determines that, in this justification process, adequate justification has been submitted for such a rate. d) In the event the time period identified in c) above falls within a non-growing season, and a change from the 'Current Rate' is required, the 'Current Rate' shall apply for the duration of that non-growing season, and either the Contingent or Alternate Rate shall be effective the following non-growing season. e) In the event the permittee does not submit justification according to a), b) and c) above, the permittee shall commence applying at the Contingent Rate, as specified in Section F of this permit, no later than twenty four (24) months after permit issuance. In the event the time period identified in e) above falls within a non-growing season, the 'Current Rate' shall apply for the duration of that non-growing season, and the Contingent Rate shall be effective the following non-growing season.

F. Permit Limits and Conditions

Category	Permit Limits and Conditions												
Type of Wastewater	Whey Processing Wastewater												
Application Site Area	All Hydraulic Management Unit Designations listed in Appendix 1 having Activity Status of 'ACTIVE' are permitted for wastewater land application. Total acreage for ACTIVE HMUs on the Expansion Acreage is 453.4 acres. Total acreage for ACTIVE HMUs on the Legacy Acreage is 96.4 acres. The Legacy Acreage is permitted for emergency use only (see CA-022-01 Item 3).												
Application Season	365 days/year												
Growing Season (GS)	April 1 through October 31 (214 days)												
Non-growing Season (NGS)	November 1 through March 31 (151 days)												
Reporting Year for Annual Loading Rates	November 1 through October 31												
Growing Season Hydraulic Loading Rate, each HMU (Applies to wastewater and supplemental irrigation water).	Growing Season (GS) Hydraulic Loading Rate shall be substantially equal to the Irrigation Water Requirement (IWR) throughout the growing season												
Non-Growing Season Maximum Hydraulic Loading Rate – Expansion Acreage	<p><u>Current NGS Hydraulic Loading Rate:</u> 10 inches/acre (each HMU) or 123 MG (Expansion Acreage Total).</p> <p><u>Contingent NGS Hydraulic Loading Rate:</u></p> <table> <tr> <td>MU-002221</td><td>7.54 inches/acre or 13.1 MG</td></tr> <tr> <td>MU-002222</td><td>7.02 inches/acre or 20.9 MG</td></tr> <tr> <td>MU-002223</td><td>6.39 inches/acre or 23.2 MG</td></tr> <tr> <td>MU-002224</td><td>2.74 inches/acre or 3.1 MG</td></tr> <tr> <td>MU-002225</td><td>4.83 inches/acre or 7.1 MG</td></tr> <tr> <td>MU-002226</td><td>6.95 inches/acre or <u>9.7 MG</u></td></tr> </table> <p style="text-align: right;">77.1 MG (Expansion Acreage Total)</p> <p>See Section E (CA-022-07) for explanation of these rates.</p>	MU-002221	7.54 inches/acre or 13.1 MG	MU-002222	7.02 inches/acre or 20.9 MG	MU-002223	6.39 inches/acre or 23.2 MG	MU-002224	2.74 inches/acre or 3.1 MG	MU-002225	4.83 inches/acre or 7.1 MG	MU-002226	6.95 inches/acre or <u>9.7 MG</u>
MU-002221	7.54 inches/acre or 13.1 MG												
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MU-002224	2.74 inches/acre or 3.1 MG												
MU-002225	4.83 inches/acre or 7.1 MG												
MU-002226	6.95 inches/acre or <u>9.7 MG</u>												
Maximum Non-Volatile Dissolved Solids (NVDS) Loading Rate Limit, pounds/acre-year, each HMU	No NVDS loading rate limits are specified at this time. DEQ will determine appropriate NVDS loading rates based upon review of Section E Compliance Condition submittal CA-022-07.												
Livestock Grazing	A grazing management plan shall be submitted to DEQ for review and approval prior to any grazing activities.												
Ground Water Quality	Wastewater land application activities conducted by the permit shall not cause a violation of the <i>Ground Water Quality Rule</i> (GWQR), IDAPA 58.01.11 as now existing or later amended.												

F. Permit Limits and Conditions

Category	Permit Limits and Conditions
Maximum COD Loading, seasonal average in Pounds/acre-day, each HMU	50 pounds / acre-day seasonal average for growing season. 50 pounds / acre-day seasonal average for the non-growing season.
Maximum Nitrogen Loading Rate, pounds/acre-year, each HMU (from all sources including waste solids and supplemental fertilizers)	150% of typical crop uptake (see Section C definitions) or loading rates specified in the University of Idaho Fertility Guides.
Construction Plans	Prior to construction or modification of all wastewater facilities associated with the land application system or expansion, detailed plans and specifications shall be submitted for review and approved by DEQ. Within 30 days of completion of construction, the permittee shall submit as-built plans for DEQ review and approval.
Buffer Zones	<p>All buffer zones must comply with, at a minimum, local zoning ordinances. Other minimum buffer zones are as follows:</p> <ul style="list-style-type: none"> • 300 ft from reuse site and inhabited dwellings • 50 ft from reuse site and areas accessible by the public • 100 ft from reuse site and permanent and intermittent surface water • 50 feet from reuse site and irrigation ditches and canals • 500 feet from reuse site and private water supply wells¹ • 1000 feet from reuse site and public water supply wells¹ • Berms and other BMPs shall be used to protect the well head of on-site wells. <p>1) These buffer zone distances shall be maintained unless a Department approved well location acceptability analysis indicates an alternative buffer zone is acceptable</p>
Supplemental Irrigation Water Protection	For systems with wastewater and fresh irrigation water interconnections, DEQ-approved backflow prevention devices are required.
Odor Management	The land application facilities and other operations associated with the facility shall not create a public health hazard or nuisance conditions including odors. These facilities shall be managed in accordance with a DEQ approved Odor Management Plan. See Section E, CA-022-01. In the event that nuisance odors, verified by DEQ, occur, the Plan shall be revised as necessary to eliminate or minimize the reoccurrence of nuisance odors.

F. Permit Limits and Conditions

Category	Permit Limits and Conditions
Fencing and Posting	None Required
Runoff Control	Upon approval of the runoff management plan by DEQ, required in Section E CA-022-06 of this permit, the permittee shall implement the plan, and shall construct, operate, and maintain the control structures and other BMPs in accordance with the plan.
Allowable Crops	Crops grown for direct human consumption (those crops that are not processed prior to consumption) are not allowed.

G. Monitoring Requirements

The Permittee is allowed to apply wastewater and treat it on a land application site as prescribed in the table below and in accordance with all other applicable permit conditions and schedules.

- 1) Appropriate analytical methods, as given in the *Idaho Guidance for Reclamation and Reuse of Municipal and Industrial Wastewater*, or as approved by the Idaho Department of Environmental Quality (hereinafter referred to as DEQ), shall be employed. A description of approved sample collection methods, appropriate analytical methods and companion QA/QC protocol shall be included in the facility's Quality Assurance Project Plan (QAPP), which shall be part of the Operation and Maintenance Manual.
- 2) The permittee shall monitor and measure parameters as stated in the Facility Monitoring Table in this section.
- 3) Samples shall be collected at times and locations that represent typical environmental and process parameters being monitored.
- 4) Unless otherwise agreed to in writing by DEQ, data collected and submitted shall include, but not be limited to, the parameters and frequencies in the Facility Monitoring Table on the following pages. Wastewater monitoring is required at the frequency shown in the table below if wastewater is applied anytime during the time period shown.
- 5) Ten (10) soil sample locations shall be selected for each Soil Monitoring Unit (SMU) with greater than fifteen acres and Five (5) soil sample locations shall be selected for each SMU with fifteen acres or less. Three (3) soil samples shall be collected at each sample location, one at 0-12 inches, one at 12-24 inches, and one at 24-36 inches, or refusal. The soil samples collected at each depth shall be composited to yield three (3) samples for analysis from each SMU.
- 6) Ground Water Monitoring Procedure: Ground Water Monitoring Wells shall be purged a minimum of three casing volumes and/or until field measurements for pH, specific conductance and temperature meet the following conditions: two successive temperature values measured at least five minutes apart are within one degree Celsius of each other, pH values for two successive measurements measured at least five minutes apart are within 0.2 units of each other, and two successive specific conductance values measured at least five minutes apart are within 10% of each other. This procedure will determine when the wells are suitable for sampling for constituents required by the permit. Other procedures, such as low flow sampling, may be considered by DEQ for approval. The static water level shall be measured prior to pumping or sampling for ground water.
- 7) Surface water sampling guidance: DEQ to review and approve methods, timing and locations for sampling prior to initial sampling event.
- 8) Annual reporting of monitoring requirements is described in Section H, Standard Reporting Requirements.
- 9) Monitoring locations are defined in Appendix 1, "Environmental Monitoring Serial Numbers".

G. Monitoring Requirements

Facility Monitoring Table

Frequency	Monitoring Point	Description/Type of Monitoring	Parameters
Daily	Flow meter	Flow of wastewater into land application system	Volume (million gallons and acre-inches) to each hydraulic management unit (HMU), record daily, compile monthly
Monthly	Effluent to land application	Wastewater quality into land application system – 24-hr. Composite	Chemical Oxygen Demand, Total Kjeldahl Nitrogen, Ammonia-Nitrogen, Nitrite + Nitrate-Nitrogen, Total Phosphorus, Chloride, Electrical Conductivity, Potassium, pH, Total Dissolved Solids (TDS), Volatile Dissolved Solids (VDS)
Quarterly (for the first year only, 4 sample events) – Jan, April, July and Oct	Effluent to land application	Wastewater quality into land application system – 24-hr. composite.	Total Dissolved Inorganic Solids (TDIS) – See Definitions Table in Section C. Submit analysis of individual ions in addition to TDIS.
Daily	Flow meter or Calibrated Pump Rate	Supplemental Irrigation Water	Volume (million gallons and acre-inches) to each HMU, record daily, compile monthly
May and Oct of first permit year	Supplemental Irrigation at diversions and/or production wells	Grab sample	Nitrate + Nitrite Nitrogen, Total Phosphorus, Total Dissolved Solids, Volatile Dissolved Solids, Chloride, Total Kjeldahl Nitrogen
Quarterly – Jan, April, July and Oct	Each ACTIVE Ground Water monitoring well, listed in Appendix 1	See Note 6	Water Table Elevation, Water Table Depth, Nitrate-Nitrogen, Ortho Phosphorus, Total Dissolved Solids, Total Iron, Total Manganese, Chloride, Dissolved Iron ¹ , Dissolved Manganese ¹ , pH, Conductivity, and Temperature.
Daily during NGS (when land applying)	Each ACTIVE HMU	Visual Observation	Field condition observations for areas of ponding, ice, unusual conditions, etc.)

G. Monitoring Requirements

Frequency	Monitoring Point	Description/Type of Monitoring	Parameters
Annually (April)	Each ACTIVE SMU	See note 5	Electrical Conductivity, Nitrate-Nitrogen, Ammonium Nitrogen, Plant Available Phosphorus, pH, % organic matter, potassium, and SAR. Note: Conduct DTPA Fe and Mn analyses April 2007 and 2011 only
Annually	Each ACTIVE HMU	Calculate both GS and NGS wastewater loading rate	Million gallons/HMU & Inches/acre for each HMU
		Calculate Season-Specific Irrigation Water Requirement for comparison with GS hydraulic loading.	Inches/acre-month for each crop type
		Calculate seasonal average COD loading rate for both GS and NGS	Pounds/acre-day
		Calculate wastewater nitrogen, phosphorus, and NVDS loading rates	Pounds/acre-year
		Report nitrogen and phosphorus fertilizer application rates	Type and Pounds/acre-year
		Calculate nitrate-nitrogen, phosphorus, and NVDS loading rates from supplemental irrigation application.	Pounds/acre-year
		Calculate nitrogen and phosphorus application rates from waste solids	Pounds/acre-year
		Crop type and yield	Pounds/acre and total pounds per HMU (specify moisture basis)

G. Monitoring Requirements

Frequency	Monitoring Point	Description/Type of Monitoring	Parameters
		Plant tissue analysis: Composite sample of harvested portion	Nitrate-nitrogen, Total Kjeldahl Nitrogen, Total Phosphorus, ash (dry basis)
		Calculate crop nitrogen, phosphorus, and ash removal	Pounds/acre and total pounds per HMU (dry basis)
Annually	All flow measurement locations.	Flow measurement calibration of all flows to land application.	Document the flow measurement calibration of all flow meters and pumps used directly or indirectly measure all wastewater, tail water, flushing water, and supplemental irrigation water flows applied to each HMU.
Annually	All supplemental irrigation pumps directly connected to the wastewater distribution system.	Backflow testing	Document the testing of all backflow prevention devices for all supplemental irrigation pumps directly connected to the wastewater distribution system(s). Report the testing date(s) and results of the test (pass or fail). If any test failed, report the date of repair or replacement of backflow prevention device, and if the repaired/replaced device is operating correctly.
April 2007 and April 2011 only.	ACTIVE Groundwater Monitoring Wells listed in Appendix 1.	Grab sample (See Note 6).	Sodium, Potassium, Calcium, Magnesium, carbonate, bicarbonate.
April 2007 and April 2011 only.	Domestic and municipal wells within ¼ mile of all land application acreage.	Grab sample (with well owner's permission. See note 6).	Specific Conductivity, Total Dissolved Solids (TDS), Nitrite + Nitrate Nitrogen, Ortho Phosphorus, Chloride, Sulfate, Total Iron, Total Manganese, Sodium, Potassium, Calcium, Magnesium, carbonate, bicarbonate, Dissolved Iron ¹ , Dissolved Manganese ¹

1. Analytical results are required for dissolved iron and/or manganese only if the results for total iron and/or manganese exceed the standards in IDAPA 58.01.11.200.01.b.

H. Standard Reporting Requirements

- 1.) The Permittee shall submit an Annual Wastewater Reuse Site Performance Report ("Annual Report") prepared by a competent environmental professional no later than January 31 of each year, which shall cover the previous reporting year. The Annual Report shall include an interpretive discussion of monitoring data (ground water, soils, hydraulic loading, wastewater etc.) with particular respect to environmental impacts by the facility.
- 2.) The annual report shall contain the results of the required monitoring as described in *Section G. Monitoring Requirements*. If the permittee monitors any parameter more frequently than required by this permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the annual report.
- 3.) The annual report shall be submitted to the Engineering Manager in the applicable Regional DEQ Office.

Boise Regional Office
1445 N. Orchard
Boise, ID 83706-2239
208-373-550

Coeur d'Alene Regional Office
2110 Ironwood Parkway
Coeur d'Alene, ID 83814
208-769-1422

Idaho Falls Regional Office
900 N. Skyline, Suite B
Idaho Falls, ID 83402
208-528-2650

Lewiston Regional Office
1118 "F" Street
Lewiston, ID 83501
208-799-4370

Pocatello Regional Office
444 Hospital Way, #300
Pocatello, ID 83201
208-236-6160

Twin Falls Regional Office
1363 Fillmore St.
Twin Falls, ID 83301
208-736-2190

A copy of the annual report shall also be mailed to:

Richard Huddleston, P.E.
Wastewater Program Manager
1410 N. Hilton
Boise, ID 83706
208-373-0561

- 4.) Notice of completion of any work described in *Section E. Compliance Schedule for Required Activities* shall be submitted to the Department within 30 days of activity completion. The status of all other work described in Section E shall be submitted with the Annual Report.
- 5.) All laboratory reports containing the sample results for monitoring required by *Section G. Monitoring Requirements* of this permit shall be submitted with the Annual Report.

I. Standard Permit Conditions: Procedures and Reporting

1. The permittee shall at all times properly maintain and operate all structures, systems, and equipment for treatment, operational controls and monitoring, which are installed or used by the permittee to comply with all conditions of the permit or the Wastewater Reuse Permit Regulations, in conformance with a DEQ approved, current Plan of Operations (Operations and Maintenance Manual) which describes in detail the operation, maintenance, and management of the wastewater treatment system. This Plan of Operations shall be updated as necessary to reflect current operations.
2. Wastewater(s) or recharge waters applied to the land surface must be restricted to the premises of the application site. Wastewater discharges to surface water that require a permit under the Clean Water Act must be authorized by the U.S. Environmental Protection Agency.
3. Wastewater must not create a public health hazard or nuisance condition as stated in IDAPA 58.01.16.600.03. In order to prevent public health hazards and nuisance conditions the permittee shall:
 - a. Apply wastewater as evenly as practicable to the treatment area;
 - b. Prevent organic solids (contained in the wastewater) from accumulating on the ground surface to the point where the solids putrefy or support vectors or insects; and
 - c. Prevent wastewater from ponding in the fields to the point where the ponded wastewater putrefies or supports vectors or insects.
4. The permittee shall:
 - a. Manage the wastewater reuse treatment site as an agronomic operation where vegetative cover is grown and harvested or grazed to utilize the nutrients and minerals in the wastewater, and,
 - b. Not hydraulically overload any particular areas of the wastewater reuse treatment site.
5. All waste solids, including dredgings and sludges, shall be utilized or disposed in a manner which will prevent their entry, or the entry of contaminated drainage or leachate therefrom, into the waters of the state such that health hazards and nuisance conditions are not created; and to prevent impacts on designated beneficial uses of the ground water and surface water. The permittee's management of waste solids shall be governed by the terms of the DEQ approved Waste Solids Management Plan, which upon approval shall be an enforceable portion of this permit.
6. If the permittee intends to continue operation of the permitted facility after the expiration of an existing permit, the permittee shall apply for a new permit at least six months prior to the expiration date of the existing permit in accordance with the Wastewater Reuse Permit Regulations and include seepage tests on all lagoons per latest DEQ procedures.
7. The permittee shall allow the Director of the Idaho Department of Environmental Quality or the Director's designee (hereinafter referred to as Director), consistent with Title 39, Chapter 1, Idaho Code, to:
 - a. Enter the permitted facility,
 - b. Inspect any records that must be kept under the conditions of the permit.
 - c. Inspect any facility, equipment, practice, or operation permitted or required by the permit.
 - d. Sample or monitor for the purpose of assuring permit compliance, any substance or any parameter at the facility.
8. The permittee shall report to the Director under the circumstances and in the manner specified in this section:
 - a. In writing thirty (30) days before any planned physical alteration or addition to the permitted facility or activity if that alteration or addition would result in any significant change in information that was submitted during the permit application process.
 - b. In writing thirty (30) days before any anticipated change which would result in non-compliance with any permit condition or these regulations.
 - c. Orally within twenty-four (24) hours from the time the permittee became aware of any non-compliance which may endanger the public health or the environment at telephone numbers provided in the permit by the Director (see below)

DEQ Regional Office: see Permit Certificate Page

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I. Standard Permit Conditions: Procedures and Reporting

Emergency 24 Hour Number: 1-800-632-8000

- d. In writing as soon as possible but within five (5) days of the date the permittee knows or should know of any non-compliance unless extended by the DEQ. This report shall contain:
 - i. A description of the non-compliance and its cause;
 - ii. The period of non-compliance including to the extent possible, times and dates and, if the non-compliance has not been corrected, the anticipated time it is expected to continue; and
 - iii. Steps taken or planned to reduce or eliminate reoccurrence of the non-compliance.
 - e. In writing as soon as possible after the permittee becomes aware of relevant facts not submitted or incorrect information submitted, in a permit application or any report to the Director. Those facts or the correct information shall be included as a part of this report.
9. The permittee shall take all necessary actions to prevent or eliminate any adverse impact on the public health or the environment resulting from permit noncompliance.
 10. The permittee shall determine (on an on-going basis) if any noxious weed problems relate to the permitted sites. If problems are present, coordinate with the Idaho Department of Agriculture or the local County authority regarding their requirements for noxious weed control. Also address these control operations in an update to the Operations and Maintenance Manual.

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J. Standard Permit Conditions: Modifications, Violation, and Revocation

1. The permittee shall furnish to the Director within reasonable time, any information including copies of records, which may be requested by the Director to determine whether cause exists for modifying, revoking, re-issuing, or terminating the permit, or to determine compliance with the permit or these regulations.
2. Both minor and major modifications may be made to this permit as stated in IDAPA 58.01.17.700.01 and 02 with respect to any conditions stated in this permit upon review and approval of the DEQ.
3. Whenever a facility expansion, production increase or process modification is anticipated which will result in a change in the character of pollutants to be discharged or which will result in a new or increased discharge that will exceed the conditions of this permit, or if it is determined by the DEQ that the terms or conditions of the permit must be modified in order to adequately protect the public health or environment, a request for either major or minor modifications must be submitted together with the reports as described in Section I. *Standard Reporting Requirements*, and plans and specifications for the proposed changes. No such facility expansion, production increase or process modification shall be made until plans have been reviewed and approved by the DEQ and a new permit or permit modification has been issued.
4. Permits shall be transferable to a new owner or operator provided that the permittee notifies the Director by requesting a minor modification of the permit before the date of transfer.
5. Any person violating any provision of the Wastewater Reuse Permit Regulations, or any permit or order issued thereunder shall be liable for a civil penalty not to exceed ten thousand dollars (\$10,000) or one thousand dollars (\$1,000) for each day of a continuing violation, whichever is greater. In addition, pursuant to Title 39, Chapter 1, Idaho Code, any willful or negligent violation may constitute a misdemeanor.
6. The Director may revoke a permit if the permittee violates any permit condition or the Wastewater Reuse Permit Regulations.
7. Except in cases of emergency, the Director shall issue a written notice of intent to revoke to the permittee prior to final revocation. Revocation shall become final within thirty-five (35) days of receipt of the notice by the permittee, unless within that time the permittee request an administrative hearing in writing to the Board of Environmental Quality pursuant to the Rules of Administrative Procedures contained in IDAPA 58.01.23.
8. If, pursuant to Idaho Code, 67-5247, the Director finds the public health, safety or welfare requires emergency action, the Director shall incorporate findings in support of such action in a written notice of emergency revocation issued to the permittee. Emergency revocation shall be effective upon receipt by the permittee. Thereafter, if requested by the permittee in writing, a revocation hearing before the Board of Environmental Quality shall be provided. Such hearings shall be conducted in accordance with the Rules of Administrative Procedures contained in IDAPA 58.01.23.
9. The provisions of this permit are severable and if a provision or its application is declared invalid or unenforceable for any reason, that declaration will not affect the validity or enforceability of the remaining provisions.
10. The permittee shall notify the DEQ at least six (6) months prior to permanently removing any permitted reuse facility from service, including any treatment, storage, or other facilities or equipment associated with the reuse site. Prior to commencing closure activities, the permittee shall: a) participate in a pre-site closure meeting with the DEQ; b) develop a site closure plan that identifies specific closure, site characterization, or cleanup tasks with scheduled task completion dates in accordance with agreements made at the pre-site closure meeting; and c) submit the completed site closure plan to the DEQ for review and approval within forty-five (45) days of the pre-site closure meeting. The permittee must complete the DEQ approved site closure plan.

Appendix 1

Environmental Monitoring Serial Numbers

HYDRAULIC MANAGEMENT UNITS

Current Serial Number	Obsolete Serial Number	Description	Acres	Activity Status
NONE	MU-002201	Fields 1, 2, 3, 4, 5, & 6 (Legacy Acreage)	100.5	INACTIVE
NONE	MU-002202	Old Emergency Area	variable	INACTIVE
NONE	MU-002203	Fuchs Property	60.0	INACTIVE
MU-002221	MU-002204	Pivot 1N	64.1	ACTIVE
MU-002222	MU-002205	Pivot 2N	109.7	ACTIVE
MU-002223	MU-002206	Pivot 3N (non-cropped rock outcrop wedge excluded)	133.6	ACTIVE
MU-002224	MU-002207	Pivot 4N	41.0	ACTIVE
MU-002225	MU-002208	Pivot 5N	53.8	ACTIVE
MU-002226	MU-002209	Pivot 6N	51.2	ACTIVE
NONE	MU-002210	Old Hand line Field 7H, 8H, and 9H	26.0	INACTIVE
MU-002227	NONE	Expansion Acreage Handline Field 7a (Field A) and Field 7b (Field B)	13.4	INACTIVE
MU-002228	MU-002201	Pivot 8 ("future Pivot" Legacy/emergency acreage)	18.3	ACTIVE
MU-002229	MU-002201	Pivot 9 (Legacy/emergency acreage)	62	ACTIVE
MU-002230	MU-002201	Fields 1a, 2, and 4 (Legacy/emergency acreage)	16.2	ACTIVE

Notes:

1) Acreage values in this table are from Drawing No: 2421022F1, Cascade Earth Sciences dated 5/19/2004, revised 11/20/2004 and are the acreage values used in this permit for compliance and enforcement purposes.

WASTEWATER SAMPLING POINTS

Serial Number	Description
WW-002201	Wastewater prior to land application (grab sample at Facility surge pond)
WW-002202	Wastewater prior to land application (grab sample at Expansion Acreage surge pond)
WS-002201	Waste Solids applied to HMUs (grab sample)

Appendix 1
Environmental Monitoring Serial Numbers

SOIL MONITORING UNITS

Current Serial Number	Obsolete Serial Number	Description	Current Associated MU	Obsolete Associated MU	Activity Status
NONE	SU-002201	Fields 4, 5, & 6 (Legacy Acreage)	NONE	MU-002201	INACTIVE
NONE	SU-002202	Old Emergency Area	NONE	MU-002202	INACTIVE
NONE	SU-002203	Fields 1, 2, & 3 (Legacy Acreage)	NONE	MU-002201	INACTIVE
NONE	SU-002204	Fuchs Property	NONE	MU-002203	INACTIVE
SU-002221	SU-002205	Pivot 1N	MU-002221	MU-002204	ACTIVE
SU-002222	SU-002206	Pivot 2N	MU-002222	MU-002205	ACTIVE
SU-002223	SU-002207	Pivot 3N (non-cropped rock outcrop wedge excluded)	MU-002223	MU-002206	ACTIVE
SU-002224	SU-002208	Pivot 4N	MU-002224	MU-002207	ACTIVE
SU-002225	SU-002209	Pivot 5N	MU-002225	MU-002208	ACTIVE
SU-002226	SU-002210	Pivot 6N	MU-002226	MU-002210	ACTIVE
NONE	SU-002211	Old Hand line Field 7H, 8H, and 9H	NONE	MU-002209	INACTIVE
SU-002228	SU-002201	Pivot 8 ("future Pivot" Legacy/Emergency acreage)	MU-002228	MU-002201	ACTIVE
SU-002229	SU-002201 & SU-002203	Pivot 9 (Legacy/Emergency acreage)	MU-002229	MU-002201	ACTIVE
SU-002230	SU-002201 & SU-002203	Fields 1a, 2, and 4 (Legacy/Emergency acreage)	MU-002230	MU-002201	ACTIVE

GROUND WATER MONITORING

Serial Number	Description (private, irrigation, dedicated monitoring)	Activity Status
GW-002201	Well C (old Preston Well) (Private Well)	INACTIVE
GW-002202	Ward Well (Private Well)	INACTIVE
GW-002203	New Preston Well (Private Well)	ACTIVE
GW-002204	Wyant Well (Private Well)	INACTIVE
GW-002205	New City Well (Municipal Well)	INACTIVE
GW-002206	Old City Well (Municipal Well)	INACTIVE
GW-002207	MW 2 (Monitoring Well)	ACTIVE
GW-002208	MW 3 (Monitoring Well)	ACTIVE

Appendix 1
Environmental Monitoring Serial Numbers
LAGOONS

Serial Number	Description
LG-002201	Lined Wastewater Surge Pond at Facility
LG-002202	Lined Wastewater Surge Pond at Expansion Acreage